

## REMARKS

Applicant thanks the examiner for the interview of November 21, 2006. Applicant has amended the pending independent claims to more particularly point out the invention. In order to rapidly inspect a residential building certain procedures are required to prepare the residential building for inspection. The use of these procedures yield sufficient contrast in the temperature profiles to allow for rapid inspection. Claim 10 has been amended to recite that the residential building is prepared for inspection and then the temperature profiles are obtained. The temperature profile can be assessed to detect a thermal anomaly indicative of a problem. Similarly, claim 26 was amended to prepare the residential structure to detect a potential electrical problem and then to obtain the temperature profile.

The Court of Appeals for the Federal Circuit has explicitly addressed § 103 and followed the approach the Supreme Court set forth for applying that provision. Section 103 provides, in pertinent part:

A patent may not be obtained...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. § 103(a).

The Supreme Court in *Graham* held that:

While the ultimate questions of patent validity is one of law, the § 103 condition, which is but one of three conditions, each of which must be satisfied, lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

*Graham v. John Deere, Co.*, 383 U.S. 1 (1966).

Thus, under *Graham*, the obviousness inquiry is highly fact specific, and requires an examination of the following: (1) the scope and content of the prior art; (2) the differences between the patented invention and what already existed in the prior art; (3) the ordinary level of skill of people working in the field; and (4) other objective evidence which may suggest that the invention would not have been obvious. The Court also warned lower courts to “guard against slipping into use of hindsight,”...and to resist the temptation to read into the prior art the teachings of the invention in issue.” 383 U.S. at 36. *See also Ashland Oil, Co. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 291 (Fed. Cir. 1985), *cert. denied* 475 U.S. 1017 (1986).

Moreover, the Federal Circuit’s so-called “teaching-suggestion-motivation” standard for obviousness is fully consistent with *Graham* and its progeny. Under that standard, there must be some motivation or suggestion to combine specific prior art in such a way as to arrive at the particular combination disclosed in the patent at issue. *See, e.g., Ecolochem, Inc. v. Southern California Edison Co.*, 227 F.3d 1361, 1372 (Fed. Cir. 2000), *cert. denied*, 532 U.S. 974 (2001); *Ashland Oil*, 776 F.2d at 293. Importantly, as *Graham* instructed, the injection of hindsight in evaluating obviousness must be avoided; the requirement of a suggestion to combine prior art prevents hindsight reconstruction by accused infringers who try to use the patent-in-suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. *See, e.g., Yamanouchi Pharmaceutical Co., Ltd. v. Danbury Pharmacal, Inc.*, 231 F.3d 1339, 1343 (Fed. Cir. 2000) (“the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness.”); *Ecolochem*, 227 F.3d at 137-72 (“Combining prior art references without evidence of a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability –the essence of hindsight.”) (citations omitted); *Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 907 (Fed. Cir. 1988).

In the office action, Claim 10 was rejected under 35 U.S.C. § 103(a) as being patentable over ASTM-C 1060-90 in view of publication titled “100’s of Tips on Saving Energy and Money at Home . . .” by Argentino. Claim 10 currently reads as follows:

Claim 10 (currently amended) A method to rapidly inspect residential building components for a designated entity comprising:

preparing a residential building for inspection by creating a temperature differential of greater than 10°F between the inside and the outside of said residential building and turning on substantially all light switches and substantially all exhaust blowers in said residential building; and then

obtaining temperature profiles of the exterior residential building components selected from the group consisting of wall, eave and fascia;

obtaining temperature profiles of the interior surface of a pitched roof;

obtaining temperature profiles of the interior residential building components;

obtaining temperature profiles of each electrical circuit in a residential building;

assessing each of said temperature profiles to detect a thermal anomaly indicative of a problem with said residential building components; and

reporting a problem to said designated entity.

ASTM-C 1060-90 relates to practices for inspecting insulation in the envelope cavities of frame buildings. The procedures and components discussed in this reference do not relate to exterior residential building components such as exterior wall, eave and fascia and interior surface of a pitched roof. Additionally, this reference does not relate to plumbing, structural members and ducts.

Additionally, it is stated in this reference that:

Although infrared imaging systems have the potential to determine many factors concerning the thermal performance of a wall, roof, floor, or ceiling, the emphasis in this practice is on determining whether insulation is missing or whether an insulation installation is malfunctioning. Anomalous thermal images from other apparent causes may also be recorded as supplemental information, even though their interpretation **may require procedures and techniques not presented in this practice.**

ASTM-C 1060-90 at 5.1

Argentino only states that “. . . infrared cameras . . . to find inefficiencies that cannot be detected by a visual inspection.” No further examples or specifics are disclosed with respect to the conditions or components that can be detected with infrared. As the Court of Appeals for the Federal Circuit has stated multiple times before, an invention also may not be rendered obvious unless the prior art is sufficiently enabling. *Motorola, Inc. v. Interdigital Technology Corp.*, 121 F.3d 1461, 1471 (Fed. Cir. 1997); *Beckman Instruments, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1551 (Fed. Cir. 1989). The disclosure in Argentino is not enabling with respect to the claimed invention.

Additionally, the examiner provides no textual support for the limitation, “turning on substantially all light switches and substantially all exhaust blowers in said residential building.” Rather, he states that “turning on substantially all light switches and substantially all exhaust blowers in the building when doing such tests is within the knowledge that is generally available to one of ordinary skill in the art.” However, this is not standard of review, a positively recited step in the claim must be shown by some evidence. This is not a question of motivation to combine reference. There is no objective evidence that this element of claim 10 was known by one skilled in the art.

Additionally, Applicants have submitted factual evidence to negate the inference of obviousness: In the declaration of Bruce R. Thomas, he states that:

Based on the process described in the attached patent application, I create a temperature differential of greater than 10°F between the inside and the outside of the residential building and turn on substantially all light switches and substantially all exhaust blowers in the residential building, prior to obtaining temperature profiles. Under these conditions I can then obtain temperature profiles of the exterior residential building components; obtain temperature profiles of the interior surface of a pitched roof; obtain temperature profiles of the interior residential building components; obtain temperature profiles of each electrical outlet in a residential building; assess each of the temperature profiles to detect a thermal anomaly indicative of a problem with the residential building components; and provide a report listing problems to the homeowner. I did not create a temperature differential of greater than 10°F between the inside and the outside of the residential building and turn on substantially all light switches and substantially all exhaust blowers in the residential building, prior to learning these techniques from HomeSafe™. The use of these techniques allow me to rapidly inspect a building because I obtain high contrast temperature profiles that can be easily interpreted. There has been a long felt need in the industry for a process to rapidly, nondestructively inspect residential buildings. Particularly, as a past real estate agent, I can see a need for an infrared based home inspection technology

that is sufficiently accurate to detect a variety of defects such that the report can be used in real estate transactions.

See Bruce R. Thomas Declaration ¶¶ 6-9.

The rejections of pending claim 10 as unpatentable under 35 U.S.C. § 103(a) are respectfully traversed, since a *prima facie* case of obviousness has not been made by the Examiner. To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be met. First, the reference or references, taken alone or in combination, must teach or suggest each and every element recited in the claims. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must “be found in the prior art, and not be based on applicant’s disclosure.” (See M.P.E.P. § 2143 (8<sup>th</sup> Ed. 2001)). Applicant submits that these requirements have not been met for at least the following reasons:

First, the references cited by the examiner do not teach or suggest each and every element of the recited in claim 10. The ASTM method only relates to the detection of insulation. Indeed the ASTM document is clear on this point—infrared may be useful in other areas outside of the inspection of insulation but “their interpretation may require procedure and techniques not presented in this practice.” The Argentino reference does not disclose or suggest any limitation because it is not enabling. A reasonable chance of success must exist. The Lee Declaration shows what is possible if the method is practiced within the parameters of the invention. These possibilities were not recognized in the cited references. It is only based upon applicant’s disclosure that the claimed invention is known. Additionally, this technology has the indicia of nonobviousness in that there was a long felt need in the industry to develop such comprehensive, fast and reliable scans.

Thus, Applicants respectfully suggest that a *prima facie* case of obviousness has not been made.

Additionally, Claims 26-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over ASTM-C 1060-90 in view of Argentino and Boldstar in the February 14, 2006 office action.

Claim 26 reads as presented:

Claim 26 (currently amended) A method to detect a potential electrical problem in a

residential building comprising:  
preparing said residential building to detect a potential electrical problem by turning on substantially all light switches in said residential building; turning on substantially all exhaust blowers in said residential building; and then  
obtaining temperature profiles of substantially all electrical outlets in said residential building; and assessing each of said temperature profiles for an anomaly indicative of an electrical problem.

ASTM-C 1060-90 relates to practices for inspecting insulation in the envelope cavities of frame buildings. The procedures and components discussed in this reference do not relate to exterior residential building components such as exterior wall, eave and fascia and interior surface of a pitched roof. Additionally, this reference does not relate to plumbing, structural members and ducts.

Additionally, it is stated in this reference that:

Although infrared imaging systems have the potential to determine many factors concerning the thermal performance of a wall, roof, floor, or ceiling, the emphasis in this practice is on determining whether insulation is missing or whether an insulation installation is malfunctioning. Anomalous thermal images from other apparent causes may also be recorded as supplemental information, even though their interpretation **may require procedures and techniques not presented in this practice.**

ASTM-C 1060-90 at 5.1

Boldstar discloses taking an infrared image of an **electrical panel**. The present invention claims **electrical outlets**. Boldstar is unrelated to the claimed electrical outlets. Additionally, it is interesting to note that neither positively recited method steps of 1) turning on substantially all light switches in said residential building; or 2) turning on substantially all exhaust blowers in the residential building are disclosed in the Boldstar reference.

The rejections of pending claim 26-30 as unpatentable under 35 U.S.C. § 103(a) are respectfully traversed, since a *prima facie* case of obviousness has not been made by the Examiner. To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be met. First, the reference or references, taken alone or in combination, must teach or suggest each and every element recited in the claims. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist.

Moreover, each of these requirements must “be found in the prior art, and not be based on applicant’s disclosure.” (See M.P.E.P. § 2143 (8<sup>th</sup> Ed. 2001)). Applicant submits that these requirements have not been met for at least the following reasons:

First, the references cited by the examiner do not teach or suggest each and every element recited in claims 26-30. The ASTM method only relates to the detection of insulation. The Argentino reference does not teach or suggest any limitation because it is not enabling. Boldstar relates to electrical panels not electrical outlets. Additionally, a reasonable chance of success must exist. The Lee Declaration shows what is possible if the method is practiced within the parameters of the invention. These possibilities are not recognized by the cited references. It is only based on a review of the applicant’s specification that these procedural steps are combined to obtain unexpected results, as shown in Peng Lee’s declaration. Additionally, this technology has the indicia of nonobviousness in that there was a long felt need in the industry to develop such comprehensive, fast and reliable scans.

The examiner has presented no factual basis for the assertion that the two claimed process steps were within the knowledge of one skilled in the art. In fact, the examiner’s assertions with respect to why one skilled in the art would use these process steps prior to an inspection, show why this assertion is wrong.

In this case, the cited prior art teaches obtaining temperature profiles of all of the electrical outlets and ducts when inspecting the interior components of the building, and assessing the profiles of the electrical outlets and ducts for an anomaly indicating an electrical problem to determine if the circuits are overheating and to determine if the ducts are leaking, respectively, wherein turning on substantially all light switches and substantially all exhaust blowers in the building ducts when doing such tests is within the knowledge that is generally available to one of ordinary skill in the art since it must be performed in order to inspect the electrical outlets and ducts without having to move from area to area turning each outlet and duct on, i.e., saves time to turn them all on at once and inspect them while they are all on.

10/708,571, June 8, 2006 office action at p. 8

First, Boldstar relates to electrical panel inspection. It does not relate to electrical outlets. The present application relates to the inspection of the numerous electrical outlets in a residential structure. It is noted that the step of “turning on substantially all light switches and substantially all exhaust blowers in said residential building” is related to providing an increased electrical load to increase **the contrast** of the thermal image at each electrical outlet.

The element electrical outlet is not cited in the Boldstar reference and the suggestion to modify the Boldstar reference to include the positively related step of “turning on substantially all of the light switches and substantially all the exhaust blowers in said residential building” to save time is unrelated to the motivation to add this element in the context of the present claimed invention.

Additionally, Applicants have submitted factual evidence to negate the inference of obviousness:

In the declaration of Bruce R. Thomas, he states that:

Based on the process described in the attached patent application, I create a temperature differential of greater than 10°F between the inside and the outside of the residential building and turn on substantially all light switches and substantially all exhaust blowers in the residential building, prior to obtaining temperature profiles. Under these conditions I can then obtain temperature profiles of the exterior residential building components; obtain temperature profiles of the interior surface of a pitched roof; obtain temperature profiles of the interior residential building components; obtain temperature profiles of each electrical outlet in a residential building; assess each of the temperature profiles to detect a thermal anomaly indicative of a problem with the residential building components; and provide a report listing problems to the homeowner. I did not create a temperature differential of greater than 10°F between the inside and the outside of the residential building and turn on substantially all light switches and substantially all exhaust blowers in the residential building, prior to learning these techniques from HomeSafe™. The use of these techniques allow me to rapidly inspect a building because I obtain high contrast temperature profiles that can be easily interpreted. There has been a long felt need in the industry for a process to rapidly, nondestructively inspect residential buildings. Particularly, as a past real estate agent, I can see a need for an infrared based home inspection technology that is sufficiently accurate to detect a variety of defects such that the report can be used in real estate transactions.

See Bruce R. Thomas Declaration ¶¶ 6-9.

Thus, Applicants respectfully suggest that a prima facie case of obviousness has not been made.


**CONCLUSION**

Applicant respectfully submits that all pending claims are now in condition for allowance.

Respectfully Submitted,

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